

ABSTRACT

5 β -isophorone is formed by isomerizing α -
isophorone in the presence of an isomerizing catalyst (an
aliphatic C₅₋₂₀ polycarboxylic acid) in an isomerizing-
reaction unit 1. The β -isophorone thus formed is oxidized
with oxygen in an inert solvent in the presence of an
oxidizing catalyst (a complex salt of a transition metal
and an N,N'-disalicylidenediamine) in an oxidizing-
10 reaction unit 2, thereby forming ketoisophorone. After
removing a low-boiling point component, which is an
impurity (non-conjugated cyclic ketone), from the reaction
mixture using a distilling unit 3, a high-boiling component
(oxidizing catalyst) is separated in a distilling unit 4,
15 and then ketoisophorone is separated from the solvent in
the separation unit 5. Thereafter, the solvent containing
0 to 5,000 ppm (weight basis) of the impurities and
substantially free from ketoisophorone is recycled to the
oxidizing reaction through a recycling line 6. According
20 to the present invention, the combination of the
isomerizing reaction and the oxidizing reaction makes it
possible to produce ketoisophorone from α -isophorone while
maintaining the activity of the oxydizing catalyst.

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